



Tram safety

Space Center Houston trams are experiencing safety hazards with pedestrians and cars at JSC. Story on Page 3.



Quality award

DynaCorp hands out its highest quality award to JSC employees at Ellington Field. Photo on Page 4.

Space News Roundup

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No. 11

NASA budget remains stable in fiscal 1997

Agency budget of \$13.8 billion includes \$3.2 billion for JSC

NASA's budget will drop by little more than a tenth of a percent in fiscal 1997, Administrator Daniel S. Goldin said Tuesday, maintaining stable funding for the space program in an era when almost all agencies' budgets are declining, some precipitously.

The 1997 budget totals just over \$13.8 billion, a reduction of 0.11 percent from last year's total budget authority of \$13.82 billion. It includes \$5.36 billion for human space flight, \$5.8 billion for science, aeronautics and technology, and \$2.56 billion for mission support.

JSC's total fiscal 1997 budget will be just under \$3.2 billion.

"We asked for stable funding through fiscal '97, and that's exactly what the President's budget gives us," Goldin said. "This will allow us to continue to restructure NASA in an orderly and well thought-out way. We will continue to deliver a space and aeronautics program that is relevant, balanced and stable, and we will protect the human dignity of our employees and our contractors."

The budget is consistent with NASA's strat-

egy of absorbing a 36 percent cut through the year 2000 while maintaining near-term funding stability, he added, and will allow the agency to ensure safety and real cost savings while eliminating overlap and low priority support, but not essential programs.

Goldin ruled out any Reduction in Force for fiscal 1996, but said continued success in restructuring will be required to stave off such measures as the agency works toward its fiscal 2000 goal of 17,500 employees. Buyouts and other management tools have allowed

NASA to downsize from 25,000 to 21,000 employees over the past two years in an orderly and dignified manner, he said.

The human space flight portion of the budget includes \$1.8 billion for development, support and operations of the International Space Station, \$138 million for the U.S./Russian cooperative program, \$3.15 billion for space shuttle operations, and \$271 million for payload operations including Spacelab and associated processing, engineering

Please see **PRESIDENT**, Page 4

Commander, pilot named for STS-82

By Eileen Hawley

Astronauts Ken Bowersox and Scott Horowitz have been named to command and pilot, respectively, the second space shuttle mission to service the Hubble Space Telescope scheduled for early next year.

They join Payload Commander Mark Lee, Greg Harbaugh, Steve Smith and Joe Tanner who were named in May 1995 as the space walkers for the mission. Steve Hawley, who will serve as the flight engineer and primary remote manipulator system operator, was named to the crew in February.

The 10-day STS-82 mission currently includes four planned space walks. The four extravehicular activity crewmembers will alternate on the space walks to accomplish a number of equipment changeouts and upgrades on the telescope. Major equipment changeouts include two science instruments and a data interface unit.

The instruments are the Near Infrared Camera Multi-Object Spectrometer and the Space Telescope Imaging Spectrograph.

Bowersox has held a variety of assignments including: flight software testing in the Shuttle Avionics Integration Laboratory; technical assistant to the director of Flight Crew Operations; Astronaut Office representative for Orbiter landing and rollout issues; chief of the Astronaut Office Safety Branch; and chairman of the Spaceflight Safety Panel.

A three flight veteran, Bowersox has logged more than 39 days in space. He flew as pilot on STS-50 in 1992 and STS-61 in 1993, and was commander of STS-73 in 1995. STS-50 was the first flight of the United States Microgravity Laboratory and the first Extended Duration Orbiter flight. STS-61 was the first Hubble Space Telescope servicing and repair mission. STS-73 was the second flight of the United States Microgravity Laboratory.

Scott has worked technical issues for the Astronaut Office Operations Development Branch and has supported crew for shuttle launches and landings. Horowitz served as pilot on STS-75.



The STS-76 crew takes a break during the Terminal Countdown Demonstration Test. From left are Pilot Rick Searfoss, Commander Kevin Chilton and Mission Specialists Shannon Lucid, Linda Godwin, Ron Sega and Rich Clifford. *Atlantis* is expected to liftoff from Kennedy Space Center Thursday and dock with the Russian Mir Space Station late Friday.

NASA Photo

Atlantis ships Lucid to Mir space station

By James Hartsfield

The countdown for the third shuttle docking with the Russian Mir Space Station proceeded smoothly this week, although forecasters were predicting only a 20 percent chance of acceptable launch weather for *Atlantis*' planned 2:35 a.m. CST Thursday liftoff.

However, the forecast improved greatly for early today—calling for an 80 percent chance of acceptable weather. A launch today would take place at 2:13 a.m. CST. Thursday's launch window totaled about 10 minutes, while a seven-minute launch window was available today for *Atlantis* to take aim at the Mir.

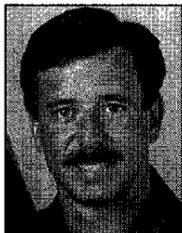
Work on the countdown was delayed slightly at KSC late Monday as strong thunderstorms passed through the launch pad area, however the time was made up and the countdown back on schedule by Tuesday afternoon.

The crew of STS-76—Commander Kevin Chilton; Pilot Rick Searfoss; Mission Specialist Shannon Lucid, who will become a Mir-21 crew member after docking; and Mission Specialists Rich Clifford, Linda Godwin and Ron Sega—arrived at KSC just after midnight Monday in preparation for the launch. A Thursday

Please see **STS-76**, Page 4



Bowersox



Horowitz

Fifteenth STS-1 anniversary celebration set for April

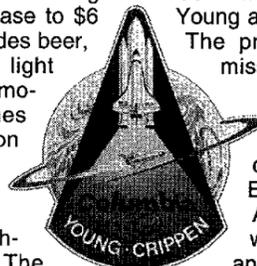
The 15th anniversary of STS-1 is just around the corner and JSC will celebrate with a "Liftoff Party."

This celebration, patterned after the legendary splashdown/post-landing parties of years past will be from 4:30-7:30 p.m. April 12 at the Gilruth Center.

STS-1 Commander John Young, space shuttle program officials and astronauts will share their memories of this historic mission. The party will draw together current and former JSC civil servant and contractor employees to relive memories and renew friendships.

Tickets are \$4 and are on sale at the JSC Exchange Store in Bldg. 11. Ticket prices increase to \$6 April 9. The price includes beer, wine, soft drinks, light snacks and a commemorative button. James Coney Island will be on hand with hot dogs for purchase.

Live music will be provided by the "Southern Cross" band. The Exchange Store will have souvenir items at the party available for purchase.



STS-1 was launched April 12, 1981 with Commander John Young and Pilot Robert Crippen.

The primary objective of the mission was to check out the overall shuttle system, accomplish a safe ascent into orbit and to return to Earth for a safe landing. All of these objectives were met successfully and *Columbia*'s worthiness as a reusable space vehicle was verified.

The only payload carried on the

mission was a Development Flight Instrumentation package that contained sensors and measuring devices to record orbiter performance and the stresses that occurred during launch, ascent, orbital flight, descent and landing.

The first shuttle flight lasted two days, six hours, 20 min and 53 seconds. *Columbia* came through the flight with flying colors, and it was to fly the next four shuttle missions.

For additional information on the anniversary party call Ginger Gibson, x30596 or Teresa Sullivan, x38970.

Lawrence named new manager in Russia

By Kyle Herring

Astronaut Wendy Lawrence will replace Charlie Precourt as the NASA manager of operational activities at Star City, Russia.

As Director of Operations, Russia, Lawrence will support training and preparations of NASA astronauts at the Gagarin Cosmonaut Training Center in Star City. She also will be the primary link between NASA and the GCTC management, coordinating all training and other operations involving NASA or contractor personnel in Star City.

Lawrence, the sixth astronaut to

serve in this rotational assignment will continue to establish operational and managerial relationships with Star City management and Russian cosmonauts. These relationships are pivotal to successful, long-term joint operations involving NASA, the Russian Space Agency and GCTC.

Lawrence will leave for Russia this month and join fellow astronauts John Blaha, Jerry Linenger, Mike Foale and James Voss, who are training in Star City. Precourt will return to JSC to begin training as commander of the sixth shuttle/Mir docking mission, STS-84.

Lawrence's technical assignments within the Astronaut Office have included: flight software verification in the Shuttle Avionics Integration Laboratory and as an Assistant Training Officer. Lawrence flew as a mission specialist on STS-67 in March 1995. This mission was the second flight of the ASTRO observatory, a unique complement of three telescopes. During the 16-day mission, the crew conducted observations to study the far ultraviolet spectra of faint astronomical objects and the polarization of ultraviolet light from hot stars and distant galaxies.



Wendy Lawrence

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

Walt Disney's World on Ice—A Star Packed Show: April 6 at the Summit. Tickets cost \$10.

JSC Picnic: March 31 at Astroworld. Tickets cost \$12 for the first 3,800, \$20 after. Tickets includes all Astroworld rides and attractions, barbecue dinner and a free return ticket to Holiday in the Park.

Hockey: Houston Aeros vs Detroit Vipers 6 p.m. April 14 at the Summit. Tickets cost \$12.50.

Basketball: Houston Rockets vs. Denver Nuggets April 11. Tickets cost \$16.50 and \$22.50.

Children's Easter Party: 10 a.m.-noon April 6 at the Gilruth Center. Tickets cost \$4 for children, \$1 for adults.

Bluebonnet Bus Trip: April 13, tickets cost \$15 and include lunch. April 20, tickets cost \$10.

Sea World: Adult tickets cost \$24.50, Children (3-11) cost \$17.25.

Space Center Houston: Discount tickets, adult, \$8.75; child (3-11), \$7.10.

Movie discounts: General Cinema, \$4.75; AMC Theater, \$4; Sony Loew's Theater, \$4.75

Stamps: Book of 20, \$6.40.

Coupon books: Gold C \$10, Entertainment 96 books \$30, Certificate books order popular brand coffees and cereals by mail and receive substantial discounts. Booklet cost \$30.

Metro tickets: Passes, books and single tickets available.

JSC

Gilruth Center News

EAA badges: Dependents and spouses may apply for photo identification badges from 7 a.m.-9 p.m. Monday-Friday; and 8 a.m.-4 p.m. Saturdays. Dependents must be between 16 and 23 years old.

Fitness Challenge: 1996 Fitness Challenge runs to Aug. 31. Employees are eligible to win \$100 gift certificates. For more information call Larry Wier at x30301.

Defensive driving: One day course is offered once a month. Cost is \$25. Interested employees should call the Gilruth.

Stamp club: Meets at 7 p.m. every 2nd and 4th Monday in Rm. 216.

Aerobics: new classes will begin April 2.

Women's self defense: Martial Arts training for women only from 5-6 p.m. Tuesdays and Wednesdays. Cost is \$25 a month.

Weight safety: Required course for employees wishing to use the weight room are offered from 8-9:30 p.m. March 28. Pre-registration is required. Cost is \$5.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays.

Aikido: Martial arts class meets from 6:15-7:15 p.m. Tuesday and Wednesday. Cost is \$25 per month. New class begins April 2.

Ballroom dancing: Cost is \$60 per couple. For additional information call the Gilruth Center at x33345.

Country and Western dancing: Beginner class meets 7-8:30 p.m. Monday. Advance class meets 8:30-10 p.m. Monday. Cost is \$20 per couple.

Fitness program: Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information, call Larry Wier at x30301.

JSC

Property

Rent: University Trace condo, 2 story TH, 1200 sq ft, 2-2.5, LR, FPL, lg DR/den, all appliances, W/D, alarm system, patio, \$685/mo. x32645 or 486-5668.

Sale: Webster, 2-2-2CP condo, upstairs flat, new A/C, solar screens, kitchen & bath upgrades, wet bar/FPL, ceiling fans, W/D conn, \$37.5k. 280-0285.

Sale: League City, 3-2-2, 3 acres barn, pond, lots of trees, \$140k. 554-6138.

Sale: LaPorte/Creekmont, 3-2-2, FPL, new roof, new carpet/linoleum, new paint, \$65.5k. 992-5080.

Sale/Lease: Boat slip on Clear Lake w/roof & motorized boat hoist of power boats, access to water, \$7.5k sell or \$125/mo lease. 474-4922

Sale: Waterfront lot, .5 ac on Dickinson Bayou, bulkhead, wooded, \$65k obo. x31370 or 334-7412.

Sale: 130 cleared acres, 5 pastures, 15 mi East of Tyler, house, hay & horse barns. 488-5058.

Sale: Dickinson, 3-2-2, lg cul-de-sac lot, FPL, sitting room off master bedroom, \$85k. 337-3459.

Lease: Brookforest, 3-2-2, furnished, outdoor spa, FPL, ceiling fans, other extras. x34132 or 486-5331.

Sale: Wooded lot 90' x 135' in Taylor Lake Estates, \$39.5k can finance. Don, x38039 or 333-1751.

Sale: Friendswood, Heritage Park Village, 3-2-5, 2137 sq ft, ex cond, \$110k. 992-4043.

Rent: South Lake Tahoe cabin, 3-2, sleeps 8, cable TV/VCR, microwave, modern kitchen, W/D, \$75/ntly, weekly & holiday rates. x41065 or 326-2866.

Rent: Beach house, fully furnished, ocean view, Crystal Beach, Galveston County, sleeps 10, cable TV, FPL, weekend & weekly rates. 486-1888.

Cars & Trucks

'57 Chevy Bel Air, V8, P/S, P/B, auto, 4 dr, A/C doesn't work, ex for restoration, \$4,950. Dale, x30432.

'76 MG Midget, Brit Racing green, restored, ex cond, classic, \$5k obo. Shane, 244-1022 or 992-1162.

'94 Chevy C1500 ext cab Silverado PU, loaded, A/C, auto, all power, cruise, tilt, \$14,950. 997-2280.

'86 Audi GT Coupe, stereo/cass, 5 spd, sunroof, cover, 90k mi, ex cond, \$3.9k. Glen, 280-8644.

'76 Buick Regal, 2 dr, blue, 350 V8, 81.5k mi, good cond, \$1.4k. Conner, x38193.

'86 Mazda RX7, gold w/burgundy inter, sunroof, '89 motor, re-built rear end, \$2.5k. Julie, 532-4191.

'80 Chevy Luv PU, w/parts & manuals, runs, needs some work, make offer. Ray, x38030.

'90 Honda Prelude SI, black/black, sunroof, 5 spd, new brakes, looks/runs great, \$7,895 obo. 334-7961.

'95 Chevrolet S-10, 4x4, A/C, ABS, alarm, bedliner, tinted windows. Mike, x41866 or 554-8781.

'90 LeBaron Prem conv, ex cond, low mi, new tires, CD, leather, \$8.5k. 488-6526.

'86 Dodge station wagon, air/heater, good cond, \$1.1k. 480-3424.

'85 Audi 5000S, 4 dr, 62k mi, ex cond, sunroof, A/C, \$3.3k. x38151 or 532-1100.

'87 Camrio IROC 2, new paint, flame red, 110k mi, 12 spds, \$3.8k. x37441.

'91 Toyota 4Runner, 2WD, auto, loaded, sunroof, \$14.5. x48930 or 488-4742.

'90 Honda CRX Si, black/black, new kenwood stereo, sunroof, \$5.6k. x32634 or 480-2998.

'72 3/4 ton Ford PU, rebuilt big block 390, 10 ply tires, extra clean inside, 996-8522.

'84 Bronco 4x4 full size, new engine/transmission, chrome wheels w/altera tires. 996-8522.

'87 Hyundai, maroon, clean, looks good, runs good,

\$950 obo. Randy, x35452 or 332-5731.

'88 Honda Civic, 5 spd, manual, sunroof, A/C, AM/FM/cass, \$2,250 obo. 996-1287.

'82 Corvette, 350, auto, electric blue, gray leather, 95k mi, ex cond, \$10.5k. Brian, 488-4383.

'89 Isuzu PU, 110k mi, A/C, \$3.3k. Joe, 333-4760.

'83 300 SD Mercedes, loaded, sunroof, low mileage, ex cond, \$10.5k. 488-3588.

'93 GMC 3/4 ton V8 custom van, all pwr, cruise, alarm, hitch, luggage carrier, new tires/brakes, 37k mi, Mark III pkg, \$17.9k. Melissa, x41928 or 338-6798.

'84 Mazda GSL-SE black/red, 5 spd, sunroof, AM/FM/cass, good cond, \$2,950. 318-0412.

'93 Suzuki Sidekick, 53k mi, maroon w/gray inter, 4WD, \$9.4k. 480-8101 x560.

'55 1st Series Chevy window panel truck, partially restored, 12V. Gordon, x32442 or 998-0130.

'85 Toyota SR5, 1/2 ton PU, all terrain 4x4, roll bar w/searchlights, \$4.5k. 326-5686.

'86 Chevy Celebrity, new carburetor/alternator, new battery/tires, V6, auto, \$2k. 326-5686.

Boats & Planes

'92 Kawasaki Jet Ski Super Sport, new engine, life vests, trailer, \$3.5k. 488-5962.

'88 Yamaha Waverunner, kept in garage, life vests, maintenance manual, \$2.2k. x32634 or 480-2998.

'90 Maxim 18' boat, Mercruiser 130, I/O stainless prop, galvanized trailer, needs some upholstery repair, \$4k. Melissa, x41928 or 338-6798.

Jon boat, 16', trailer, 15Hp Yamaha, lots of extra, will separate, \$1.8k. x48495 or 280-0164.

Quachita 14' deep semi-V bottom aluminum riveted fishing boat, 18Hp Evinrude, Highlander galv trailer, swivel seats, anchor, new tires & wheels, life jackets, oars & locks, \$1.3k. x37300 or 482-7529.

'84 Century Riviera 6 meter ski boat, '95 Shorelander galv trailer, 260Hp Mercruiser, less than 200 hrs, \$10k. x30166 or 286-7374.

'88 Thundercraft Bowrider, 17', 130Hp Mercruiser, I/O, covered canopy, galv trailer, water skis, jackets, ski rafts, \$4k. Luis, x47385 or 484-6462.

'94 SeaRay SeaRayer, 14', 90Hp Jet, less than 25 hrs, access, warranty, garage kept, ex cond, \$6.5k or take up payments. x47922 or 331-8521.

'93 Kawasaki Jet Ski Super Sport XI, low hrs, 750cc engine, dual carb, single trailer, \$5.3k. Jay, 282-6759.

Cycles

'84 Kawasaki LTD 700cc, maroon, ex cond, low miles, \$1.9k obo. x34539 or 339-2559.

Audiovisual & Computers

CompuAdd 386 w/1.2MB 5.25" drive, 40MB HD, 14" Sansung CVGA monitor, mouse, misc S/W, Panasonic KPX-11241, 24 pin dot matrix printer, \$500 obo; IBM PCjr, expansion chassis, IBM color monitor, 640K RAM, 2-5.25" drives, \$100 obo. Richard, x31488.

Smith Corona personal word processor "960", extras, Cronal-CALC, Lift-Off correcting cass, script print wheel & 12 disk, \$295. 708-6179.

Dell 486DX2-66MHz full tower system w/15" monitor, 16 bit Media Vision sound card, VSR 14.4 lbs fax/modem, 450MB HD, 8MB RAM, joystick, \$900. Kent, x34857 or 333-5181.

CalComp 1043 pen plotter, E size, \$750. x37441.

486 DX2/66 motherboard w/256k cache memory, 2 VLB slots & 5 ISA slots, \$50. Mark, x3004.

Packard Bell 485DX 33MHz 130MB RAM, 4MB RAM,

Today

Cafeteria menu: Special: baked meatloaf. Total Health: baked potato. Entrees: chicken fajitas, ham steak, pork and beef eggrolls, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: stewed tomatoes, seasoned spinach, cut corn, macaroni and cheese.

Saturday

Air Force seminar: The U. S. Air Force Academy will host an information session at 1 p.m. March 23 at the Gilruth Center. High schools students interested in attending the Air Force Academy, parents, guidance counselors and administrators are invited to attend. For information call Col. Beth Dennard at 474-5818.

Star gazing: The JSC Astronomical Society and Challenger 7 Memorial Park invite the public to view the spring skies through telescopes from dusk to 10 p.m. March 23. For more information call Bill Williams 339-1367 evenings.

Monday

Reservations due: The Equal Opportunity Programs Office and the 1996 Women's History Month Committee will host the JSC's Women's History Month observance from 11:30 a.m. - 1:30 p.m. March 29, at the Gilruth Center Ballroom. This year's theme is "Building the Future on the Past: Women in Flight." Tickets cost \$8.50 and must be purchased by March 25. For more information call Jessie Hendrick, x31203.

Cafeteria menu: Special: Italian cutlet. Total Health: roast beef au jus. Entrees: chicken a la king, enchiladas with chili, vegetable lasagna, steamed pollock, French dip sandwich. Soup: split pea and ham. Vegetables: Brussels sprouts, oriental vegetables, buttered carrots, lima beans.

Tuesday

Speech contest: The Texas Gulf Coast Council of the National Management Association invites employees to the "American Enterprise Speech Contest," at 6 p.m. March 26 at the Gilruth Center. Area high school students will compete for the regional championship, a paid trip to the national finals and a \$500 savings bond. For more information call Gwen Gilliam at x34584.

Artemis society meets: The Artemis Society will meet at 7 p.m. March 26 at 13100 Space Center Blvd. For more information call Michael St. George at 783-0727.

Cafeteria menu: Special: stuffed cabbage rolls. Total Health: roasted turkey. Entrees: turkey and dressing, country style steak and hash browns, beef ravioli, baked chicken, fried cod fish. Soup: tomato Florentine. Vegetables: Italian blend, okra and tomatoes, corn cobbette, navy beans.

Wednesday

Toastmasters meet: The Space-land Toastmasters will meet at 7 a.m. March 27 at the House of Prayer Lutheran Church. For more information call Jeannette Kirinich x45752.

Astronomy seminar: The JSC Astronomy Seminar will meet at noon March 27 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

Cycle club: The Space City Cycle Club will meet at 5 p.m. March 27 at the Grumman Bldg. at Ellington Field. For more information call Mike Prendergast at x45164.

Cafeteria menu: Special: pepper steak. Total Health: stir fry pork with rice. Entrees: liver and onions, stir-fry pork with rice, steamed fish, western special, Reuben sandwich. Vegetables: steamed broccoli, yellow

squash, macaroni and cheese, vegetable sticks.

Thursday

Radio club meets: The JSC Amateur Radio Club will meet at 7 p.m. March 28 at the Nassau Bay City Hall Bldg. For more information call Larry Dietrich at x39198.

Cafeteria menu: Special: chicken fried steak. Total Health: baked potato, baked chicken, catfish special. Soup: navy bean. Vegetables: spinach, cut corn, breaded okra, pinto beans.

Friday

Reservations due: The Houston Chapter of the Performance Management Association is conducting its final luncheon meeting on the implementation of Earned Value Management Systems at JSC. The meeting is set for 11:15 a.m. March 28 at the Ramada Inn on NASA Road 1. Reservations are due March 22 to Susan Widmer at 483-4299.

Cafeteria menu: Special: tuna noodle casserole. Total Health: baked potato. Entrees: steamed salmon steak, baked chicken, fried cod fish, ham steak. Soup: seafood gumbo. Vegetables: French cut green beans, cauliflower with cheese, green peas, black-eyed peas.

March 30

Fun run: The second annual ISC 5K Fitness Run/Walk will begin at 6:30 a.m. March 30. For details call Pete Frank at 335-6110.

April 2

ABWA meets: The American Business Womens Association, Clear Lake Area Chapter will meet at 5:30 p.m. April 2 at Bay Oaks Country Club. For details call Nancy Hutchins at x34006.

Swap Shop

14" SVGA monitor, 3.5" + 5.25" FD, modem, mouse, keyboard, software Win 3.1 MSWorks, MS Money, DOS 6.0, \$600. 488-7354.

Sony 27" Trinitron TV, \$400; Magnovox 26" color TV, \$225; DCM stereo speakers, \$60/pr; Montgomery Ward, 4-head VCR w/remote, \$125; Synchronic 3-head VCR w/remote, \$70; Konica office copier, \$120; Panasonic 11241 dot matrix printer, \$110. Gus, x33425 or 286-3401.

486DX2-66, 8MB mini-twr, 14" SVGA, \$695; Compaq 386, 4MB, 14" VGA, \$395; Pentium 75-100-133-150, 8MB 635, Win 3.11 or 95 Office, \$989/1059/1219/1439, w/14" SVGA, 17" SVGA, \$375. Don, 333-1751.

Rapicon 120 Datafax, \$100; 6738M Hitachi plotter, \$140; 673 Hitachi plotter, \$149; LQ850 Epson Printer, \$50; LQ-1000 Epson printer, \$75; LQ-1050 Epson Printer, \$85 obo on the above. 244-7904.

Nokia carphone w/2 hour battery & charger, 100 number programable memory, many extra features, \$100 firm. x39034 or 474-2660.

Musical Instruments

Electric guitar Peavey Predator AX, ex cond, make offer. 554-6200.

Ibanez Roadmaster II guitar, w/case, \$250; guitar amp, Lab7 w/4 10" spkr, \$200; bass amp, Acoustic 310 w/15" spkr, plus 15" cabinet, \$300. 282-1727.

Photography

Minolta Maxima 35mm camera, 70-200mm zoom lens, auto focus, auto rewind, auto advance, flash, new \$650 sell \$375. Pete, 479-0276.

Pets & Livestock

Easter bunnies, feed & instructions included, \$15, cages available. 554-6200.

Lab-Husky cross male puppy, shots. Olga, x48912 or 484-4545.

AKC black Chow puppies, 3 male/3 female, born 12/24/95, \$150. Terry, 471-2038.

Free black female Great Dane, 9 yrs, shots, spayed. x34019 or 486-4229.

Borneo short-tailed Python, extremely tame, beautiful, 2 yrs, male, \$200. Brett, x34565 or 333-6415.

Household

Bench Craft 5 pcs sofa, 2 recliners, corner, single, dbl w/foildaway bed, blue & gray, \$1.5k obo; 6 drawer dresser w/mirror, \$300 obo. 332-2453.

Kenmore refrigerator, white, 18 cu in, ex cond, \$450. 480-4554.

Beautiful 6 light antique brass & crystal chandelier, 25" dia x 32" high, new \$600 sell \$300. 333-3992.

Queen size waterbed w/frame, semi-motionless mattress & heater, \$50. Charles, 282-3908.

Navy quilted floral print sofa, \$250; 2 end tables, \$100; 2 Stiffel lamps, \$100; 2 rust club chairs & ottoman, \$250. 474-4769.

Dark blue sofa, loveseat, cherry coffee table, \$100. 488-7354.

Refrigerator, side-by-side w/icemaker, beige, \$285; FPL screen w/glass, \$25; table lamp, pleated shade, transparent green base, \$25. 480-8051.

Bedroom set, French provincial, headboard, night stand, triple dresser & mirror, desk w/hutch & chair, \$350. 488-1326.

Amana, hi-efficiency, 2 ton, window air conditioner, \$275. Gary, 333-7126 or 480-7517.

Student desk w/hutch, \$80; foam sofa sleeper, \$50. x38274 or 486-5072.

Western style family rm furniture \$550. 286-0022.

Super single waterbed, woodframe, w/mirrored headboard, liner & heater, ex cond, \$130 obo. x45888 or 996-0697.

Super single waterbed, headboard, 6 drawer base, mattress, heater, \$100 obo. x37066 or 286-4255.

Love seat, 6', off white, still in wrapping, \$325. 326-3350 or 282-4161.

Entertainment center, 72"Hx60"Wx18"D, \$150; green velour chair, \$30. Debbie, x33077 or 480-0229.

Kenmore hvy duty washer, 10 yrs, white, new water pump, needs trans, \$35. Rich, x47257 or 996-7630.

Whirlpool washer & dryer, almond, super lg capacities, \$165. 244-8231 or 326-2893.

Wanted

Want pianist to team up w/conservatory trained violinist to perform at weddings for profit. Jim, x31168.

Want non-smoking roommate to share 4-2, Friendswood home, cable, W/D, microwave, VCR, gas grille, household privileges, \$250/mo all bills pd. Michael, x38169 or 482-8496.

Want roommate, share large home in Seabrook, single parent OK, monthly. 333-6821 or 326-2093.

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Safety is No Accident

March 1996

Electrical Safety Fair set for April

A publication of NASA's Johnson Space Center for Employees' Safety and Health

New asbestos regulations require labels

By Sean Keppta

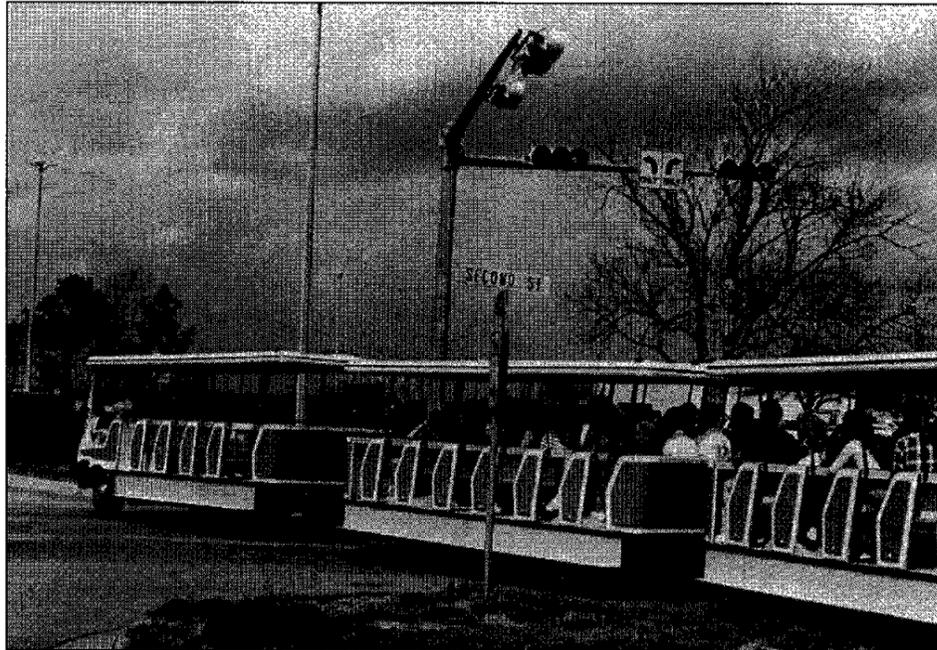
New OSHA standards for asbestos are prompting the JSC Health, Safety and Environmental Compliance Office to place warning labels on outside doors of all buildings at JSC that contain asbestos materials.

Labels also will be placed on doors of mechanical rooms containing installed asbestos-containing materials and in areas where easily crumbled asbestos containing materials are exposed.

"The revised standards have new requirements for worker exposure, work practices, training, medical surveillance and supervision," said Steve Hulka, senior industrial hygienist for Kelsey Seybold in the Environmental Health Office. A recently formed working group is interpreting how the new OSHA requirements apply to JSC and beginning the implementation process.

As stated in the labels, although the building may contain many different types of asbestos containing materials, they are not hazardous unless improperly disturbed. Because it is not feasible or recommended to remove all the asbestos-containing materials in JSC facilities, the center is currently managing these materials in place. "This involves periodic inspections, ambient and personnel air monitoring, good work practices and training," Hulka said. By having an aggressive operations and maintenance program, JSC can manage its asbestos-containing building materials and keep its employees safe and well informed.

For additional information on asbestos at JSC, call the asbestos program manager at x33120. For information or registration regarding Safety Learning Center courses for employees that perform asbestos-related activities to achieve compliance with the new requirements, call x36369.



JSC Photo by Karen Schmidt

One of the safety hazards tram drivers report is that cars on Avenue D are making left turns onto Second Street from the right hand lane. Signs indicate only vehicles in the left lane may turn left. Cars turning illegally pose a hazard to trams crossing Second Street to return to Space Center Houston.

Quick stops pose problems for tram safety

Space Center Houston is asking for help from JSC personnel and visitors. Pedestrians entering the crosswalks too quickly and drivers cutting in front of the trams are creating a problem for the drivers.

One of the most familiar sights at JSC is that of Space Center Houston trams daily criss-crossing the streets. Drivers don't like to follow the trams because of their slow speeds. Pedestrians, however, view the slow speeds as an indication that there is plenty of time to make it across the street before the trams overtake them.

"When people suddenly dart in front of the trams on foot or in cars, the potential of harm to passengers on board the trams is increased," said Tracy Ferguson of JSC's Health, Safety and Environmental Compliance Office.

The tram drivers are trained to anticipate pedestrian traffic in the crosswalks and will automatically slow down when they see a person approaching by gently applying the brakes. However, if an individual steps out suddenly into a crosswalk, or worse, into an unmarked portion of the street, the normal tram driver reaction is to apply the brakes quickly. Applying the brakes suddenly to a 19,200 pound tram creates a great deal of forward thrust, even while only traveling the normal speed of 10-12 MPH. When the tram drivers apply the brakes suddenly, the passengers—especially small children—tend to lunge forward, and injuries may occur.

"The most common injuries result from small children hitting their heads on the seats in front of them," said Pam Olson, safety supervisor for Space Center Houston.

"In one incident, the tram driver noticed a pedestrian waiting to cross the street in a non-crossing zone," Olson said. "The driver paused the tram and indicated to the pedestrian to proceed. After pausing several seconds, the driver started up and the pedestrian stepped out into the street simultaneously. The driver hit the brakes, causing an abrupt stop to prevent hitting the pedestrian. A 3-year-old child seated in the third car slid forward, biting her tongue, causing severe bleeding."

Automobiles can cause as many problems as pedestrians to the trams. Pulling out quickly or cutting in front of the tram, as well as stopping short, also will cause the tram drivers to apply the brakes quickly. "Three of our tram drivers have reported cars making a left hand turn from the right hand lane from Avenue D onto Second Street," said Olson. "The tram is in the left lane going straight across into Rocket Park. The right lane is posted 'right turn only.'"

The employees at Space Center Houston are urging extra courtesy to the trams and their passengers. Cross on-site streets in marked crosswalks only, and think twice before jumping in front of a Space Center Houston tram.

Falling objects spark study

Committee looking into variety of safety hazards

The rupture of a 1000-watt metal halide lamp, shattering glass over the air bearing floor of Bldg. 9, and a similar incident where a bulb came loose and shattered on the floor are prompting a study into the causes of such incidents.

The group, chaired by the Environmental Service Office's Trudy Papler, includes members who have experienced similar problems. Papler said the most likely reason for the rupture of the halide lamp was failure to cycle off the lamp for at least 15 minutes per week. The manufacturers of HID lamps recommend recycling any lights intended for continuous illumination.

The center has approximately 700 of these uncovered hi-bay light fixtures. Initial analysis of the bulb failures shows the cause is age. Many lighting installations at JSC have operated for more than 20 years, and maintenance is performed only when requested. Procedures are being developed to decrease the risk of unanticipated bulb failures.

The group also is investigating falling objects or debris that have fallen through holes or cut holes in roofs or overhead crawl spaces. The crawl space below the roof serves as the return air duct for most air conditioning systems on site. It is only separated

from the occupied area below it by suspended cellulose ceiling tiles. Vent holes in the ceiling tiles can allow various materials to drop onto people or equipment below.

"To help avoid accidents, work should not be performed above occupied areas," Papler said. "Every effort should be taken to schedule such activities during off-peak times, preferably week-ends, and work must be cleared through facility managers. This allows for performance of abatement and cleanup procedures without impact to normal conditions."

The committee also is concerned about objects that have been improperly installed or stored in high places. Late last year in Bldg. 210, a cabinet that fell away from its wall mountings prompted a review of similar installations. The objective of the falling objects committee is to find solutions that minimize overall risk within reasonable costs.

"One important solution to these problems is employee involvement," Papler said. "Employees should try to be aware of what is going on in areas above their individual work spaces. If a situation appears to be unsafe in any way, alert that building's facility manager to take the proper measures to correct the situation."

Employee volunteers on rodeo safety team

By Rindy Carmichael

When the Houston Livestock Show and Rodeo gears up each year, who does it call on to make sure the event is a safe one? For the last two years, coordinators have called a JSC safety expert.

Tom Sullinger, a Hernandez Engineering instructor for the NASA Safety Training Center, recently volunteered his spare time to the Houston Livestock Show and Rodeo. "I saw a need with the HLSR and knew they had to have a smooth safety team in place. I wanted to be a part of that team," Sullinger said.

A 20-year veteran safety engineer and a certified safety professional, Sullinger has served 10 years as an EMT, volunteering six of those years on ambulance duty. He also has volunteered in various outside safety committees for the past 10 years, the last two with the Houston Livestock Show and Rodeo. He has served on two of the four HLSR committee divisions—general safety and communications; the other two being medical team and investigations. "We had a total of 450 volunteer members on the safety committee for the 1996 HLSR season," Sullinger said. "Each volunteer is required to work at least four eight-hour shifts. Some volunteers come in from as far away as Utah. They arrived on Friday

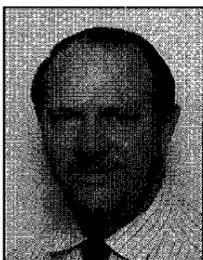
to work 16-hour shifts on Saturday and Sunday, returning home on Monday and paying their own expenses."

At any given time there may be over 100,000 people on the rodeo grounds. When compared with the 35-40 emergency volunteers working per shift to handle any medical problems that could arise, the numbers show an impressive safety program with well-trained medical emergency personnel.

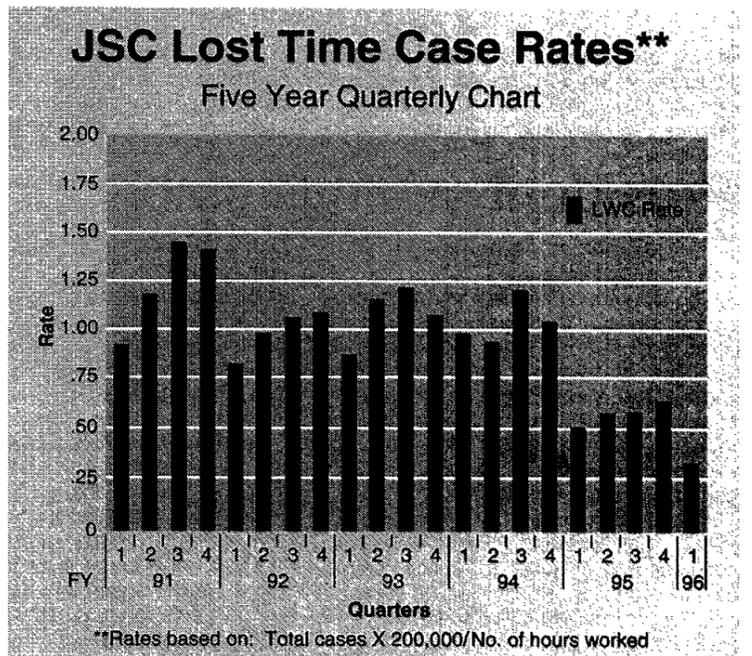
Sullinger compared JSC's safety program to the excellent HLSR program. "Everything is behind the scenes. Similar to the HLSR, JSC has trained, knowledgeable, and experienced safety personnel who are ready to assist in an emergency. People don't generally understand the real coordination and combined effort that has been developed to take care of an emergency situation. We have a quality program that works."

Of the estimated 1 million people who attended the rodeo this year, there were only two fatalities. One was a six-year-old terminally ill boy with a congenital heart problem. His family was aware of his potential death and fulfilled his dream of seeing the animals at the livestock show. The child passed away during that outing. "In a case like this, no amount of medical emergency treatment can help," commented Sullinger. "It was just his time to go."

"You never know how many people you save," he went on, "but you never forget the ones you lose."



Sullinger



STRIKING IMPROVEMENT—Now that the first figures for 1996 are in, the number of lost workday incidents at JSC continues to show improvement. The Lost Workday Case rate is based on the number of lost work day incidents per number of hours worked by 100 employees in a year. By keeping up current standards and improving safety awareness employees can continue to drive the lost workday case rate closer to zero.

Payloads shares plaque hanging honors

The Payload Operations Team, lead by Jeff Hanley, shared the honor of hanging the STS-75 plaque in Mission Control with three other teams that earned outstanding honors from Lead Flight Director Chuck Shaw.

JSC

People

"The hardest challenges for STS-75 seemed to all be associated with the Tethered Satellite System payload," Shaw said. "It would be unfair and misleading to try to single out any single group that exemplified how things were tackled and solved. The TSS payload provided the forum for four different teams to rise to the occasion and go well beyond the call of duty both preflight and real time."

Joining Hanley at the ladder was Bob Mahoney, lead of the Dynamics Training Team; Joe Williams, lead of the TSS Dynamics Team; and Terry Quick, lead of the TSS Satellite Data Recovery Team.

Young earns SAE honors

John Young, associate director of JSC, recently earned the Forest McFarland Award from the Society of Automotive Engineers. Young was cited for his contributions to technical sessions at SAE international meetings and conferences.

Guidry earns top award

Sheila Guidry of the Astronaut Selection Office recently earned the Marilyn T. Bocking Award for Secretarial Excellence. Guidry was cited for her diversity in handling a variety of tasks including awards, astronaut selection, ASCAN training and personnel processing. Her



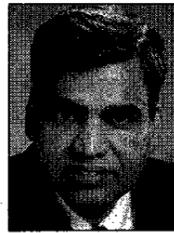
Hanley



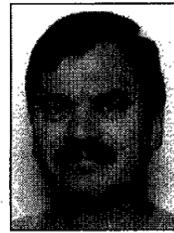
Young



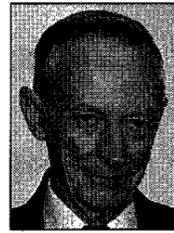
Guidry



Lulla



Hadash



Shafer

cheerful attitude and initiative were credited with keeping the office running smoothly even through peak busy times.

Lulla earns top award

Kamlesh Lulla, chief of the Earth Science Branch, recently was awarded the Outstanding South Asian Professional by the South Asian Chamber of Commerce.

Lulla was selected from more than 100 nominees for his significant scientific and technical accomplishments in the space program.

Barrios employee honored

E.J. Hadash of Barrios Technology, which supports the Manufacturing, Materials and Process Technology Division, recently was awarded a special citation for Exceptional Volunteer Service from the American Red Cross. Hadash was recognized for his personal commitment to working in disaster services since 1987. He has served as disaster communications chair since 1992 and has been vital in strengthening the chapter's communications systems.

Former security chief dies

Everett Shafer, former chief of the Security Division, died last week.

Shafer retired after 30 years of service at JSC. He began his career in 1963 as a security specialist. In 1972 he was appointed deputy chief of the Security Branch, and chief in 1978. In 1983, Shafer was appointed deputy chief of the Management Services Division and in 1986 he became chief of the Security Division where he remained until his retirement in 1993. Services were held last Saturday in Dublin, Texas.

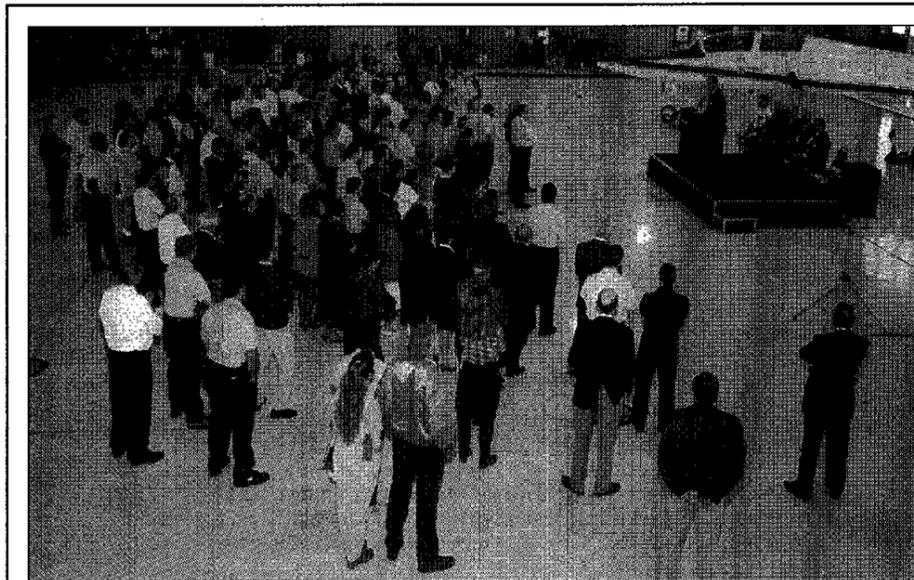
MCC open for portions of STS-76

The Mission Control Center viewing room will be open to JSC and contractor badged employees and their families during portions of the STS-76 mission.

Employees will be allowed to visit the MCC from 1-5 p.m. Saturday and 11:30 a.m.-2:30 p.m. Wednesday.

Employees must wear their badges and escort family members through the lobby of Bldg. 30 South. Children under five will not be permitted. No flash photography or loud talking will be permitted at any time. Because of the dynamic nature of shuttle mission, viewing hours may be changed or canceled without notice.

For the latest information on the schedule, call the Employee Information Service at x36765.



JSC Photo by Nick Nelms

AWARDING QUALITY PERFORMANCE—DynCorp's Chief Operating Officer Paul Lombardi presents the "President's Quality Award" to DynCorp's Johnson Support Division at an awards ceremony held last week at Ellington Field. JSD, maintenance contractor for all JSC aircraft, was chosen out of 520 operating locations and 17,000 employees worldwide to receive its company's highest performance award for outstanding team accomplishments in quality and value improvement.

Galileo scientists report Jupiter findings

Scientists continuing to analyze information returned by the Galileo atmospheric probe that plunged into Jupiter last December report more surprises about the giant gas planet.

Most significantly, the ratio of the elements that make up 99 percent of the Jovian atmosphere—helium and hydrogen—now closely matches that found in the Sun, suggesting that Jupiter's bulk composition has not changed since the planet formed several billion years ago. Estimated amounts of key heavy elements such as carbon and sulfur have increased, but minimal organic compounds were detected, and estimates for Jupiter's wind speeds have climbed still higher.

Probe scientists are reporting these refined results this week at the Lunar and Planetary Science Conference at the Gilruth Center.

The ratio of helium to hydrogen by mass is key to developing theories of planetary evolution. In the Sun, this value is about 25 percent. During a January 1996 press conference, Galileo probe scientists estimated

that this number for Jupiter was 14 percent. More comprehensive analysis of results from the probe's helium abundance detector has raised this estimate for Jupiter to 24 percent.

"This increase implies that the amount of helium in the Jovian atmosphere is close to the original amount that Jupiter gathered as it formed from the primitive solar nebula that spawned the planets," according to Richard Young, Galileo probe project scientist of Ames Research Center.

The new estimate of the helium-to-hydrogen ratio on Jupiter is supported by analysis of complementary data from the Galileo probe's neutral mass spectrometer.

These new helium results are raising related estimates for the abundances of other key compounds, such as methane. Several heavy elements, including carbon, nitrogen and sulfur, are significantly greater in abundance on Jupiter than in the Sun. "This implies that the influx of meteorites and other small bodies into Jupiter over the eons since its formation has played an important role in how Jupiter has evolved,"

said Young.

However, minimal organic compounds were detected, indicating that such complex combinations of carbon and hydrogen are rare on Jupiter and that the chances of finding biological activity on Jupiter similar to that found on Earth are extremely remote.

The strong Jovian atmospheric winds continue to exceed expectations. Wind speed estimates announced in January of up to 330 mph have grown to more than 400 mph. The winds persisted far below the one cloud layer detected, strongly suggesting that heat escaping from deep in the planet's interior drives the winds, rather than solar heating.

Further analysis of probe data has confirmed the preliminary report that the Jovian atmosphere appears to be relatively dry, with much less water than anticipated on the basis of solar composition. Scientists confirmed that the probe's instruments found much less lightning activity on Jupiter per unit area than on Earth. Lightning on Jupiter was found to be about 1/10th of that found on Earth in an area of the same size.

President submits stable funding for NASA in FY97

(Continued from Page 1)

and advanced projects.

The science, aeronautics and technology budget includes \$1.86 billion for space science, \$498 million for life and microgravity sciences, \$1.4 billion for Mission to Planet Earth, \$725 million for space access and technology, \$857 million for aeronautical research and technology, \$420 million for mission communication services and \$100 million for academic programs.

The mission support segment includes \$36.7 million for safety, reliability and quality assurance, \$291 million for space communication services, \$2.1 billion for research and program management and \$155 million for facility construction.

"In one way this budget actually is good news for NASA," Goldin said, "we have stable funding for the present in an era when almost all agencies' budgets are declining, some precipitously, in the very near term. We laid out our case and asked the administration for funding sta-

bility.... In return, we stepped up to the plate and made the hard choices relative to program restructuring and workforce decreases that other agencies now are being forced to make as a result of budget reductions and Congressional mandates. The administration has seen our good faith efforts and has backed us."

The budget includes tentative projections for the future that are significantly lower than previous expectations but not yet set in stone. The projections are for a fiscal 1998 budget of \$13.1 billion, a fiscal 1999 budget of \$12.4 billion and a fiscal 2000 budget of \$11.6 billion. Goldin said he has decided not to act on these potential out-year cuts until the long-range federal budget situation has been clarified.

Between fiscal 1997 and 2000, Goldin said the agency will save \$1.6 billion by reducing direct program support through re-engineering, streamlining, reorganization and role changes, \$1.45 billion by moving work to the private sector, \$850

million by reducing the cost of operating and maintaining NASA facilities, and \$100 million by implementing performance-based contracts for research, maintenance and operations.

"We're doing relatively well right now with regard to our budget, but we'll continue to shrink our workforce over the next few years, particularly at NASA Headquarters," he said. NASA Headquarters recently began the process of moving functions equivalent to about 200 employee positions to the centers. Some will be reassignments from Headquarters; others will be new jobs constructed from portions of various existing functions.

The process will enable NASA to meet the goals of the administration's National Performance Review, which calls for reducing headquarters organizations by 50 percent, halving the number of supervisory positions, and cutting administrative functions like procurement, personnel, budget and accounting.

New history series book now available

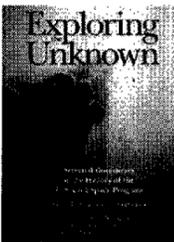
Exploring the Unknown: Selected Documents in the History of The U.S. Civil Space Program, has been published through the Government Printing Office in cooperation with the NASA History Office and is available for purchase in the JSC Exchange Store.

The publications tell the story of the U.S. space program through the actual documents which enabled individuals to plan and accomplish the nation's mission of exploring the unknown.

Volume 1, the first of three to be published, is subtitled "Organizing for Exploration." It deals with more than 200 documents, many of which are published for the first time. Each section includes a forward which provides context, bibliographical details and background information necessary to understand the documents. The documents are separated into four eras, beginning with a narrative explaining the historical significance of the documents and their place in the timeline of the space program.

Volume II, due out at the end of the year, will deal with NASA's cooperative efforts with other organizations domestically and abroad. In July 1997 the series will be completed with publication of Volume III, which will take a detailed look at the agency's programs and projects.

Employees may review a copy of Vol. 1 in the Bldg. 45 library and can purchase the book for \$20 through the Exchange Store.



STS-76 features first space walk during docking

(Continued from Page 1)

launch would lead to a docking with Mir at about 9:36 p.m. CST Friday. The hatches would be opened between the two spacecraft at about 11:35 p.m. CST Friday, and the two crews would exchange greetings and gifts in a brief ceremony.

Lucid will remain aboard the Mir station after *Atlantis* undocks, becoming the first American woman to serve as a Mir crew member. She will remain aboard the orbiting station until *Atlantis* again docks with Mir in early August.

Other highlights of the mission given a Thursday launch include a six-hour space walk by Clifford and Godwin starting at 1:10 a.m. Tuesday. The space walk will be the first ever performed while the shuttle is docked to the Mir and serve as precursor to such activities planned after launch of the International Space Station. The two space walkers will attach a package of experiments to the exterior of the Mir Docking Module that will characterize the space environment around the exterior of the station. Following retrieval of the experiments later this year, station designers will gain added insight into the environment anticipated around the International Space Station.

With a Thursday liftoff, landing would take place at 7:04 a.m. CST March 30 at KSC. For a Friday launch, the schedule of activities would move later by about a day, with the Mir rendezvous planned on Flight Day 3 of the mission and the space walk scheduled for Flight Day 6.

Last week, shuttle managers completed an investigation into a singed wiper O-ring in the solid rocket booster's nozzle-to-case joint for STS-75, and cleared *Atlantis*' solid rockets for launch.

"After reviewing both flights and test data, and after an extensive analysis, we have concluded that the nozzle-to-case joint is robust and sturdy and that the joint's design is safe to fly," said JSC Director George Abbey, who chaired a special teleconference on the analysis March 15.